

2003 Proposition 13 Urban Water Conservation Program

A-1 Cover Sheet

1. Applicant (Organization or affiliation): San Diego County Water Authority
2. Project Title: Residential High-Efficiency Clothes Washer Voucher Incentive Program
3. Person authorized to sign and submit proposal: Ken Weinberg, Director of Water Resources
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5. Funds requested (dollar amount): \$1,650,000
6. Applicant funds pledged (local cost share) (dollar amount): \$2,742,612
7. Total project costs (dollar amount): \$4,374,612
8. Estimated annual amount of water to be saved (acre-feet): average of 421 AF

Estimated total amount of water to be saved (acre-feet): 5,893

Over 14 years

Benefit/cost ratio of project for applicant: 2.15

Estimate \$/acre feet of water to be saved: \$531
9. Project life (month/year to month/year): 7/1/03 to 6/30/05
10. State Assembly District(s) where the project is to be conducted: State Assembly districts - 66th, 73rd, 74th, 75th, 76th, 77th, 78th, 79th
11. State Senate District(s) where the project is to be conducted: State Senate districts - 36th, 37th, 38th, 39th, 40th
12. Congressional District(s) where the project is to be conducted: Congressional districts - 48th, 49th, 50th, 51st, 52nd

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13. County where the project is to be conducted: San Diego County
14. Do the actions in this application involve physical changes in land use, or potential future changes in land use? ☐ (a) yes ☒ (b) no

**2003 Proposition 13 Urban Water Conservation Program
San Diego County Water Authority
Residential High-Efficiency Clothes Washer
Voucher Incentive Program**

PART A – Project, Description, Organization, Financial And Legal Information

A-4 DESCRIPTION OF PROJECT

Methods and Procedures

The Authority operates a Regional High-Efficiency Clothes Washer (HEW) Voucher Program to provide incentives for the purchase of water efficient washing machines in lieu of standard non-efficient models. A contractor, Honeywell DMC (HDMC), administers the program under Authority management. Funding is provided from the Authority, its member agencies, and the Metropolitan Water District of Southern California.

Customers who choose to participate call the Voucher Processing Center to request a voucher for a highly efficient clothes washer. If the customer is eligible, a voucher is sent to the customer to be used for the purchase of a high-efficiency clothes washer. The voucher is a pre-printed form that enables the customer to receive the discount at the time of purchase so the cost of the machine is reduced directly to the customer. This financial incentive (discount) is fronted by the store when the customer redeems the voucher. The store submits the expended voucher to HDMC for reimbursement. HDMC, in turn, invoices the Authority biweekly and the Authority invoices the funding agencies quarterly.

Only HEWs meeting a water efficiency factor of 9.5 or better qualify for the incentive in this program. Water savings are calculated on a per machine basis under normal use.

Through project duration, the Authority plans to impart 27,500 vouchers to retail customers. This will provide over 5,893 acre feet of water savings to the State. Conservation programs developed as a result of the project will support CALFED's objectives by doing the following:

- Improve water quality for all uses reducing demands on the Delta during those times of the years when water diversions can contribute to elevated salinity levels.
- Improve and increase aquatic habitats and improve ecological functions in the Bay-Delta by reducing the need for water diversions during dry years and dry periods when the impact of diversions on fish is highest.

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- Reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses by providing a new water supply that can be used to meet a portion of existing and future demands.
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A-5 MAP

Refer to Attachment A

A-6 STATEMENT OF WORK, SCHEDULE

Task List and Schedule

The residential HEW Voucher Incentive Program has been operating continuously since September 2000. The Authority is currently utilizing a CALFED grant for 5,000 HEWs. The CALFED grant agreement terminates June 30, 2003. The Authority proposes to keep the dollar amount of the incentive at the current level by utilizing Prop 13 funds in fiscal years 2003-04 through 2005-06. Vouchers will be issued to June 30, 2006 or until all 27,500 vouchers have been used.

The Authority has signed agreements with its member agencies and the Metropolitan Water District through June 30, 2004. We plan to operate the program continuously until these agreements terminate. The Authority anticipates funding agreements will then be signed with all concerned parties to insure the program runs seamlessly through June 30, 2006.

The costs, excluding staff management and monitoring costs, between the State's share and the local share for each fiscal year are broken down below. The total program cost for the customer incentive and administration fee for the 27,500 HEW vouchers is \$4,290,000.

	FY 04	FY 05	FY 06	TOTAL
DWR	\$450,000	\$600,000	\$600,000	\$1,650,000
local share	<u>\$720,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$2,640,000</u>
	\$1,170,000	\$1,560,000	\$1,560,000	\$4,290,000

The water savings for the 27,500 HEWs amounts to 5,893 acre feet over the life of the machines. Should the financial incentive be reduced, customers will be more likely to purchase a lower-cost standard clothes washer. This would decrease the amount of water savings.

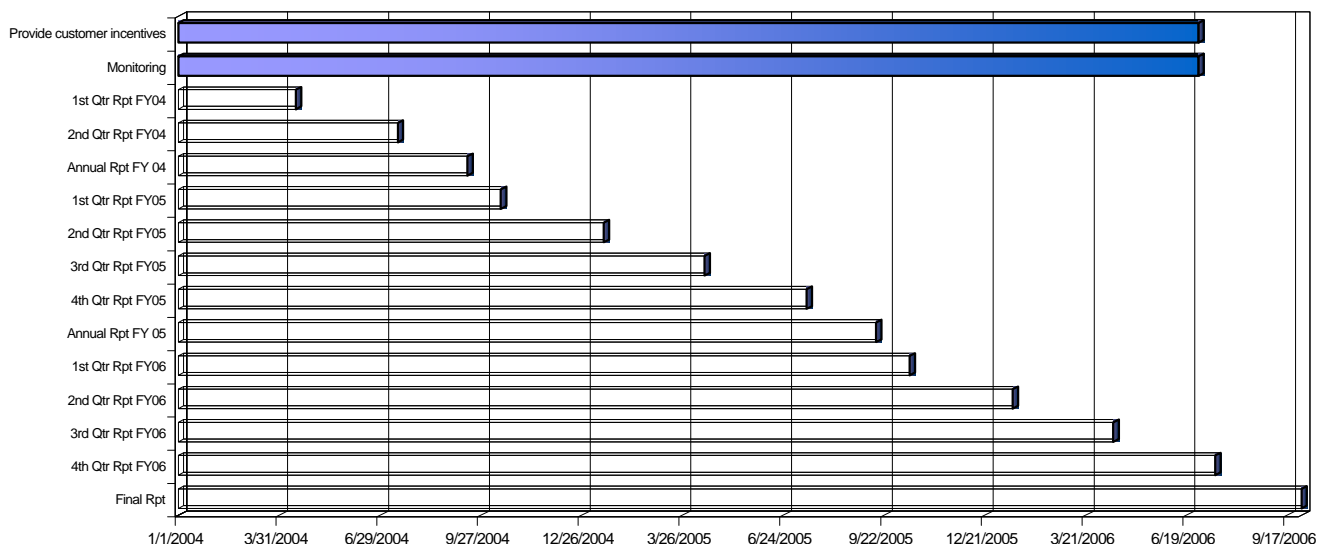
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Nature, Scope and Objectives of Project

The Authority has extensive experience managing water conservation programs. With Prop 13 funds, the program could continue to expand water conservation efforts to help realize greater water savings sooner than would be provided by our limited local economic resources. The larger dollar amount will allow financial incentives to provide assistance to more residents and will encourage water customers to choose the water saving devices. Reducing residential water use is a low cost alternative to new water supplies. We anticipate the project to begin utilizing the Prop 13 grant funding in October 2003. The water savings for the San Diego region could be realized immediately since the funding is augmenting an active program.

The market for residential HEWs is continuing to develop as domestic manufacturers are producing more models, broadening the selection over the last few years. It was anticipated that the price of HEWs would come down as more manufacturers entered the market. Unfortunately, many new models retain the high retail price. To offset these higher prices, eligible customers can use the incentive in the form of a voucher to be used as a point-of-purchase discount to reduce the cost of these more expensive machines.

To achieve program objectives, we anticipate providing financial incentives of \$125 per HEW to encourage the installation of 27,500 highly efficient clothes washers by June 30, 2006. The Authority and its member agencies will provide \$61 per unit, and Metropolitan Water District of Southern California will also contribute \$35 per unit. The program administration fee is \$31 per unit. To maintain the \$125 per unit incentive, it is necessary to obtain additional funding from the State.



Residential HEW Voucher Program

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The Authority will submit quarterly reports to the Department of Water Resources, which will be the basis for invoicing DWR. The Authority will also provide DWR with annual reports. The timeline above depicts the program tasks: (1) provide the customers incentives to purchase the highly efficient clothes washers and (2) perform installation verifications. Quarterly and annual report dates are also included.

A-7 MONITORING AND EVALUATION

All Authority conservation programs have built-in quality assurance and quality control measures to insure funds are properly expended and program guidelines have been followed. Data is available in paper and electronic format for analysis.

Monitoring the Voucher Program is a requisite task that calls for weekly, monthly, quarterly, and annual program reports. Authority staff maintains a close working relationship with the contractor by overseeing all components of the program. The Authority's program manager communicates daily via phone calls, e-mail, and faxes.

The contractor is required to perform a minimum 15% on-site inspections of customers who redeemed HEW vouchers. Authority Quality Control (QC) personnel, independent of the program manager, perform random, unannounced ride-alongs of these inspections. QC procedures also require all original documentation be forwarded to the Authority and staff reviews a minimum 15% of this documentation. In addition, the Authority QC staff performs phone surveys on both participants that were inspected and participants that were not chosen for inspection. The purpose of these phone surveys is to insure the consultant is administering the program properly. The program manager's supervisor reviews all invoices and any amount over \$10,000 is reviewed and approved by the Authority's Director of Water Resources. Random audits of all Authority programs are also performed by independent outside auditing firms under the direction of the Authority's Finance Department.

Honeywell DMC, the program's external cooperator, provides weekly, monthly and quarterly reports to the Authority. These reports track the status of vouchers and provide the allocations for each retail member agency. The weekly report is distributed to retail stores so the stores can focus on customers of the agencies with remaining vouchers. The number of available vouchers for each agency changes frequently so this weekly tracking tool is invaluable to monitoring program success.

All information is retained in paper and electronic format and is accessible to all funding partners. The Authority is governed by the Public Information Act so data is available upon written request.

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A-8 QUALIFICATIONS OF THE APPLICANT

The primary implementer is the San Diego County Water Authority. The mission of the Authority is to provide a safe and reliable supply of water to its member agencies servicing the San Diego region. Demand management, or water conservation, is frequently the lowest-cost resource available to the Authority and its member agencies. Water conservation is a well-established component in ensuring that there will be a reliable water supply in the future for the increasing population and commerce of our local region. Over the long term, conservation measures serve to defer or limit rate increases by reducing the region's need for other, more expensive supplies and increased infrastructure.

Since the Program's inception, the Authority and its member agencies have provided incentives for the installation of resource-saving devices. Projected water savings and effectiveness are based on industry standard methodologies for calculating savings, as defined by the California Urban Water Conservation Council (CUWCC).

Program Manager

Refer to Attachment B.

External Cooperators

The program will be operated by Honeywell DMC Services, Inc (HDMC). HDMC has been serving the resources management needs of water, gas, and electric utilities for over 22 years. This includes extensive experience in voucher and rebate processing, measure installations, water and energy surveys, and customer education and support services.

HDMC will be responsible for all aspects of the implementation of the Residential High-Efficiency Clothes Washer Voucher Program in conjunction with and under the guidance of the Authority. HDMC will oversee all phases of the program, including but not limited to, processing vouchers, marketing, promotion, and developing materials associated with the program. HDMC operates the existing program with a three-year contract, which extends until June 30, 2004.

HDMC has been a pioneer in the water industry for more than 15 years, designing and implementing some of the most successful water conservation programs ever delivered. HDMC is the premiere voucher-processing vendor in the industry. For each of the clients they serve, HDMC has met or exceeded the Program goals.

Working in cooperation with HDMC is WSA Marketing, a locally-based marketing and communications firm. WSA has provided extensive education, outreach, public relations, advertising, and direct-marketing activities on behalf of the Authority's Voucher Program. At the core of its marketing strategy is the belief that promoting

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installation of water-efficient fixtures need not be the work of water agencies alone. WSA utilizes its existing relationships with manufacturers and suppliers of fixtures/equipment to increase Program participation and improve point-of-purchase service to water agency customers, thereby expanding the Program's marketing reach.

HDMC and WSA Marketing have created relationships with owners, managers and related customer service supervisors and staff at water-efficient product suppliers throughout San Diego County. Included in their collective network are more than one hundred wholesale and retail locations in the San Diego County with thousands of employees serving Program customers. HDMC and WSA currently have working relationships with more than 300 business owners and key employees at San Diego County wholesale and retail suppliers, as well as an understanding of suppliers' business profiles, sales operations and accounting policies and procedures as they relate to voucher processing.

A-9 INNOVATION

The voucher concept is unique in the world of financial incentives for water conservation devices. The Authority has been issuing vouchers for water conservation devices/fixtures since 1995.

Customer satisfaction surveys have shown that the vast majority of retail water customers prefer vouchers. The customer prefers to receive the financial incentive be used to discount the price of the device. The customer does not have to wait weeks, possibly months, to obtain an after-purchase rebate. Most rebate programs only run until the funds run out and a customer is not guaranteed the rebate. With a voucher, the customer is guaranteed the discount if the voucher is used following program guidelines.

Providing the discount at the time of purchase can allow retail water customers with limited incomes to purchase a higher cost HEW. Often the \$125 voucher, combined with a retail store sale, can reduce the price significantly.

A-10 AGENCY AUTHORITY

The San Diego County Water Authority is organized and existing under the County Water Authority Act of the State of California (Chapter 45, Water Code-Appendix). The Authority's Administrative Code provides the General Manager the authority to submit an application and to enter into a funding contract with the State.

There is no litigation pending that may impact the financial condition of the Authority, the operation of the water facilities, or our ability to complete the proposed project?"

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**PART C – Plan for Completion of Environmental documentation and
Permitting Requirements**

C-1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The project is categorically exempted from CEQA. Refer to Attachment C

C-2 PERMITS, EASEMENTS, LICENSES, ACQUISITIONS, AND CERTIFICATIONS

No such documents are required for this project.

C-3 LOCAL LAND USE PLANS

No such plans are required for this project.

C-4 APPLICABLE LEGAL REQUIREMENTS

There are no applicable legal requirements for this project.

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PART D – Need for Project and Community Involvement

D-1 NEED FOR THE PROJECT

Water use efficiency investments can yield real water supply benefits to urban users in the short term and can also generate significant benefits in water quality and timing of instream flows. The program goal is to expand and accelerate the implementation of cost-effective actions. To maximize the amount of water saved, the incentive amount must be increased to encourage the purchase of these high-efficiency models over the standard top-loader.

The Authority makes significant investments in programs that minimize demand for Bay-Delta water by producing a new water supply to meet a portion of existing and future water demands. Incentives for 27,500 HEWs would provide water savings of 5,893 acre-feet over the life of the washers at a cost to the State of \$288 per acre-foot. The cost for the entire program is projected to be \$4,443,897¹. This includes the incentive, administrative fees charged by the contractor, and Authority program management staff time. The Authority's cost to purchase treated water is \$431 per acre-foot, while the local water agency funding cost for this program is \$526 per acre-foot.²

The Authority's mission is to provide a safe and reliable water supply to its member agencies³ at a reasonable cost. The Authority's 2000 Urban Water Management Plan calls for implementing a residential clothes washer incentive program to realize potential annual water conservation savings of 5,000 acre-feet by FY 2020. To accomplish this, it is necessary to provide incentives for 7,500 HEWs in FY 2003-04 and 10,000 each in FYs 2004-05 and 2005-06. This target is appropriate for the current staffing and funding levels set by the Authority's Board of Directors.

The Authority's Strategic Plan, Urban Water Management Plan, and Water Resources Plan all require full implementation of all applicable Best Management Practices (BMP) of the Memorandum of Understanding for Urban Water Conservation (MOU). This program fulfills BMP 6 - high-efficiency washing machine rebate programs.

This program also impacts energy use in California. Use of these highly efficient machines reduces the demand for both electricity and natural gas. Since these machines use up to 40% less water than the standard models, less heated water is required for cleaning clothes. Also, since the final spin in HEWs is significantly higher than standard washers, the remaining moisture content is lower, which means less energy to dry the clothes since drying time is cut substantially. The energy savings per

¹ in FY 03 dollars

² In January 2003, the rate structure for both the Authority and its member agencies changes

³ Refer to A-5 for a map of the Authority's service area

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HEW per year is 571 kWh, with dryer savings amounting to an additional 630 kWh per year⁴.

Conservation programs developed as a result of the study will support CALFED's objectives by doing the following:

- Improve water quality for all uses reducing demands on the Delta during those times of the years when water diversions can contribute to elevated salinity levels.
- Improve and increase aquatic habitats and improve ecological functions in the Bay-Delta by reducing the need for water diversions during dry years and dry periods when the impact of diversions on fish is highest.
- Reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses by providing a new water supply that can be used to meet a portion of existing and future demands.

The market for residential HEWs is continuing to develop as domestic manufacturers are producing more models, broadening the selection over the last few years. It was anticipated that the price of HEWs would come down as more manufacturers entered the market. Unfortunately, many new models retain the high retail price. To offset these higher prices, eligible customers can use the incentive in the form of a voucher to be used as a point-of-purchase discount to reduce the cost of these more expensive machines.

To achieve program objectives, we anticipate providing financial incentives of \$125 per HEW to encourage the installation of 27,500 highly efficient clothes washers by June 30, 2006. The Authority and its member agencies will provide \$61 per unit, and Metropolitan Water District of Southern California will also contribute \$35 per unit. The program administration fee is \$31 per unit. To maintain the \$125 per unit incentive, it is necessary to obtain additional funding from the State.

The water savings for the 27,500 HEWs amounts to 6,202 acre feet over the life of the machines. Should the financial incentive be reduced, customers will be more likely to purchase a lower-cost standard clothes washer. This would decrease the amount of water savings.

⁴ Preliminary Estimates of Energy & Water Savings Potential for Residential Clothes Washers, Commercial Clothes Washers, Commercial Dishwashers, Discussion Handout, prepared by M.Cubed for the California Urban Water Conservation Council, March 20, 2001.

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D-2 OUTREACH, COMMUNITY INVOLVEMENT, SUPPORT, OPPOSITION

This program has no formal outreach program but does provide bilingual information and brochures and is required to have bilingual staff available during business hours. The contractor is required to strategize ways to promote the HEW voucher program in disadvantaged communities. Many agencies partnering in the program with the Authority also provide information about the program on water bills, newsletters, web sites, and on-hold phone messages. By providing the discount at the time of purchase rather than have the consumer pay the entire cost up front and then later receive an after-purchase rebate, the incentives are available to a larger population that includes residents in disadvantaged areas.

The Authority is strongly committed to its Emerging Business Enterprise (EBE) Program and expects Authority contractors to demonstrate commitment to equal economic opportunity as well. Contractors are strongly recommended to make meaningful subcontracting and employment opportunities available to all interested and qualified firms and individuals, including EBEs and small businesses. The current contractor subcontracts marketing/customer outreach, software development, printing, and graphic design to EBEs.

The San Diego Association of Governments (SANDAG), the regional planning and growth management review board for the San Diego region, wrote a letter to the Authority stating the HEW program is compatible with the Regional Growth Management Strategy. This letter was submitted to CALFED as part of the Water Use Efficiency grant requirements.

No letters have been sent to cooperating agencies notifying them of this proposal. The grant proposal has been discussed informally with these agencies and the Authority has the support of its partners to obtain additional funding to make participation in the program more attractive.

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PART E – WATER USE EFFICIENCY IMPROVEMENTS AND OTHER BENEFITS

E-1 WATER USE EFFICIENCY IMPROVEMENTS

E-2 OTHER PROJECT BENEFITS

This program is consistent with CALFED's objectives as identified in the June 9, 2000, Framework for Action and the subsequent Record of Decision. An expanded HEW program will expedite the amount of water saved through conservation.

Depending on local conditions, between 75% and 95% of the water used in San Diego County is imported by the Authority from the Colorado River and Northern California, via the State Water Project. Water saved through the Authority's incentive programs will therefore directly reduce the need for additional imported water supplies from the San Francisco Bay-Sacramento/San Joaquin River Delta (Bay-Delta). The savings represent a net increase in fresh water supplies since the water would otherwise be discharged to the Pacific Ocean and would be unavailable reuse.

Water Quality Benefits

Reducing demands on the Bay-Delta during those times of the year when water diversions can contribute to water quality issues, i.e., has demonstrated water quality improvement. The project is estimated to reduce water demands by approximately 5,893 acre feet. This reduction is a significant step to improve water quality in the immediate future.

Bay-Delta Benefits

Reduced water demand on the Bay-Delta through augmented participation in a regional demand-reduction program can improve water supply reliability to meet future demands, thus generating real water savings while reducing diversions and providing secondary benefits to the environment. This demand reduction will contribute to the CALFED objectives of a solution to the Bay-delta issues, including water quality, supplies matched to beneficial uses, and improved habitats and ecological functions.

Meeting Objectives of Water Management Plans

Local, regional, and statewide water management plans create a framework to meet the overriding goal of water conservation in California. The Authority has established objectives to reduce demand through a variety of conservation programs, including incentive programs. Regional and statewide water management plans also include

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programmatic goals to reduce water demand throughout the San Diego region. The project contributes toward the water demand reduction goals of theses plan.

The Authority and State share in the benefit of avoiding the costs to import water from the Bay-Delta. Water conservation is a long-term solution to the problems in the Bay-Delta Estuary. This solution meets the principles that guide CALFED. Efficiently using the State's limited water resources is both a local and statewide achievement.

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PART F – ECONOMIC JUSTIFICATION: BENEFITS TO COST

F-1 NET WATER SAVINGS

The Authority will realize an average annual water savings of 420.92 acre feet by residential customers, resulting in a total discounted avoided cost of purchased water over the life of the project of \$3,130,754. This is based on the current cost of \$564.90 an acre foot of water for the Authority and its member agencies.

This reduction in potable water demand will result in reduced purchases and the elimination of associated costs of water treatment and pumping by the Authority's water supplier, the Metropolitan Water District. This will enable an equivalent amount of water to be made available for other existing demands.

F-2 PROJECT BUDGET AND BUDGET JUSTIFICATION

Budget Breakdown and Justification

The capital outlay for the Residential HEW Voucher Program involves three components. These are:

Voucher - With Prop 13 grant funding the voucher level will remain at \$125 to encourage customers to purchase HEWs instead of the standard top-loader. The current funding levels are based on the avoided costs of saving water in lieu of purchasing the water at a cost of \$431 per acre-foot.

Administrative Fee - The current administrative fee charged by HDMC is \$31 per unit through FY 04. This fee covers voucher processing, marketing, and promotion, and installation verification for 15% of participating customers randomly computer selected.

Authority Staff Time - Authority staff time comprises 3.5% of the total budget. The Authority's program manager charges 25% of her time and salary to the HEW portion of the program. The Quality Control personnel spend almost 1% of staff time to perform on-site inspections and review original documentation.

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Table 2: Capital Costs

Water Conservation Projects

	Capital Cost Category	Cost	Contingency		Subtotal
	(a)	(b)	Percent	\$	(e)
			(c)	(d)	(b+d)
				(bxc)	
(a)	Land Purchase/Easement	0		0	0
(b)	Planning/design/Engineering	0		0	0
(c)	Materials/Installation	0		0	0
(d)	Structures	0		0	0
(e)	Incentives	3,437,500		0	3,437,500
(f)	Environmental Mitigation/Enhancement	0		0	0
(g)	Administration Fee	852,500		0	852,500
(h)	Project Legal/License Fees	0		0	0
(i)	Marketing	0		0	0
(k)	Total (1) (a + ... + i)				4,290,000

- (1) Incentives of \$125 per device for 27,500 HEWs.
(2) Administration Fee is \$31 for 27,500 HEWs.
(3) No contingency fee is included

Table 3: Annual Operations and Maintenance Costs

Water Conservation Projects

Administration	Operations	Maintenance	Other	Total
(a)	(b)	(c)	(d)	(e)
51,299	0	0	0	51,299

- (1) Authority staff salary for program management/monitoring for one year.
(2) Salary for life of project is \$153,897.
(3) Does not include salary increases.
(4) Fringe Benefits are included.

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Cost Sharing

The Authority is the lead agency for the HEW Voucher Program. Retail water agencies providing funding are the Carlsbad Municipal Water District, City of Del Mar, City of Escondido, Helix Water District, Lakeside Water District, City of Oceanside, Olivenhain Municipal Water District, Otay Water District, Padre Dam Municipal Water District, City of Poway, Ramona Municipal Water District, Rincon del Diablo Municipal Water District, Riverview Water District, City of San Diego, San Dieguito Water District, Santa Fe Irrigation District, Sweetwater Authority, Vallecitos Water District, Valley Center Municipal Water District, and Vista Irrigation District. The Metropolitan Water District of Southern California and the CALFED Bay-Delta Program also co-fund the current HEW Voucher Program.

The Authority has agreements with all participating retail water agencies and the Metropolitan Water District effective through June 30, 2004. The Authority anticipates new agreements will be in effect July 1, 2004.

The Authority has a contract with the CALFED effective through June 30, 2003. CALFED provides funding for 5,000 HEW incentives from September 2001 through the term of the contract. The Authority anticipates utilizing this funding through the end of fiscal year 2002-03 when all 5,000 incentives will be distributed. The Authority proposes the Prop 13 funding replace the CALFED funds.

F-3 ECONOMIC EFFICIENCY

The value of the project's water supply is defined in Section F-1 Net Water Savings.

Tables 4a and 4b illustrates the avoided costs of the current water supply. The wastewater cost to the retail water customer is also shown.

4a. Avoided Costs of Current Supply Sources – Authority perspective

Sources of Supply (a)	Cost of Water (\$/AF) (b)
MWDSC	445.52
SDCWA	55
Member Agency	64.38
	564.9

MWDSC - Cost of water is the weighted mean of the cost of treated (\$431*45.4%) and untreated (\$349*54.6%) water from MWDSC.

SDCWA - As of 1/1/03, the Authority rate will be \$100 with \$55 being the variable cost.

Member Agency - The average member agency charge added onto the SDCWA charge is \$126.75.

Member agency fixed and variable charges vary greatly. An average of 50% variable cost is used.

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4b. Avoided Costs of Current Wastewater Fees – Customer perspective

Sources of Supply (a)	Cost of Wastewater (\$/AF) (b)
retail customer fee	1268.90

Sewer fees based on fixed multi-family residents for the City of San Diego (\$2.913/hcf). Single-family fee is variable.

Table 5 provides the project costs.⁵ over the total 16⁶ years of water savings.

Table 5: Project Costs (Long Form)

Water Conservation Projects						
Year (a)	Water Conservation Savings (b) \$/AF	Discount Factor (6.0%) (c)	Capital Costs (d)	Operation/ Maintenance Costs (e)	Total Costs (f) (d+e)	Total Discounted Costs (g) (c*f)
1		1.000	1,170,000	51,299	1,221,299	1,221,299
2	115	0.943	1,560,000	51,299	1,611,299	1,611,299
3	268	0.890	1,560,000	51,299	1,611,299	1,519,455
4	421	0.840	-----	0	0	0
5	421	0.792	-----	0	0	0
6	421	0.743	-----	0	0	0
7	421	0.705	-----	0	0	0
8	421	0.665	-----	0	0	0
9	421	0.627		0	0	0
10	421	0.592		0	0	0
11	421	0.558		0	0	0
12	421	0.527		0	0	0
13	421	0.497	-----	0	0	0
14	421	0.469	-----	0	0	0
15	421	0.442	-----	0	0	0
16	306	0.417		0	0	0
17	153	0.394	-----	0	0	0
TOTAL	5,893		4,290,000	102,598	3,222,598	3,130,754

(b) Water savings calculation is 5,250 gallons per year per HEW (Source CUWCC).

(b) Assumes a 5% free-ridership, and no removal from service area. Out migration for the San Diego region is less than 0.01% (Source SANDAG)

(d) Includes incentive and contractor administrative costs

(e) Includes SDCWA salaries

⁵ A 6% discount factor was used.

⁶ The life of each device is 14 years and the project term is 3 years, so water savings will accumulate over 16 years. Water savings will not be calculated until the 2nd year of the project.

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Table 6 quantifies the economic value of the project's benefits accrued by both water savings to the Authority, its member retail water agencies, and the Metropolitan Water District. Also included is the wastewater savings to the retail water customer.

Table 6: Project Benefits (Long Form)

Water Conservation Projects					
Year	Water Conservation Savings (AF)	Discount Factor (6.0%)	Water Supply Benefits(1)	Wastewater Benefits (1)	Total Discounted Benefits
(a)	(b)	(c)	(d)	(e)	(f) b*c*(d+e)
1		1.000	565	1,269	0
2	115	0.943	565	1,269	198,521
3	268	0.890	565	1,269	437,169
4	421	0.840	565	1,269	648,382
5	421	0.792	565	1,269	611,331
6	421	0.743	565	1,269	573,509
7	421	0.705	565	1,269	544,178
8	421	0.665	565	1,269	513,302
9	421	0.627	565	1,269	483,971
10	421	0.592	565	1,269	456,955
11	421	0.558	565	1,269	430,711
12	421	0.527	565	1,269	406,782
13	421	0.497	565	1,269	383,626
14	421	0.469	565	1,269	362,013
15	421	0.442	565	1,269	341,172
16	306	0.417	565	1,269	234,088
17	153	0.394	565	1,269	110,588
TOTAL	5,893		9,603		6,736,299

(1) Total avoided costs, alternative costs or revenue benefits.

(2) Sewer fees based on fixed MF for City of San Diego (\$2.913/hcf); SF fee is variable

(3) Average annual AF/year savings is 420.92.

**2003 Proposition 13 Urban Water Conservation Program
San Diego County Water Authority HEWs**

Table 7: Benefit/Cost Ratio

Water Conservation Projects

Project Benefits \$(1)	6,736,299
Project Costs \$(2)	3,130,754
Benefit/Cost Ratio	2.15

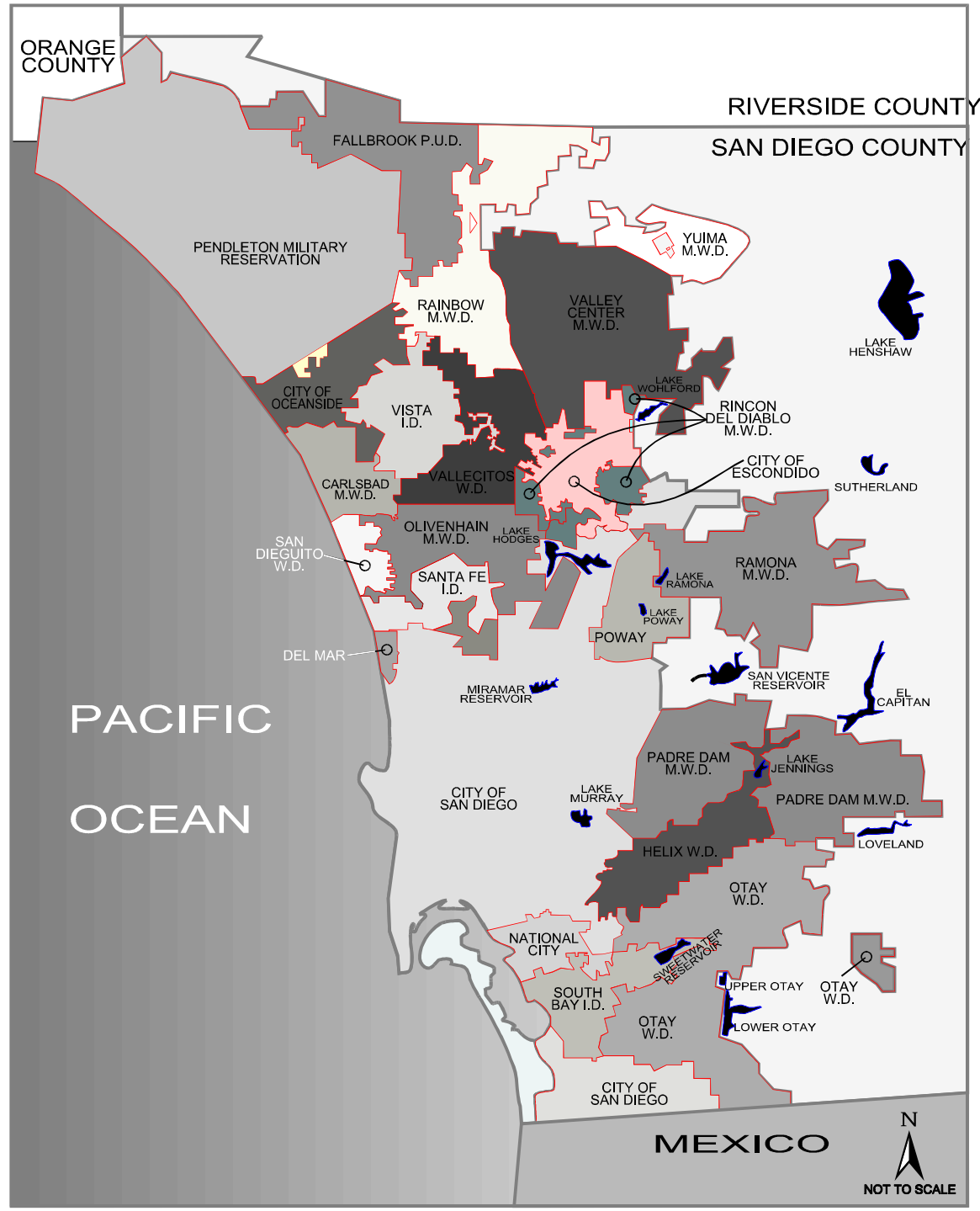
(1) From Table 6: Project Benefits (Long Form)

(2) From Table 5: Project Costs (Long Form)

Table 7 illustrates the benefit/cost ratio of the project from the agency and customer perspective is 2.15. This meets the DWR criteria of a locally cost-effective project.

**2003 Proposition 13 Urban Water Conservation Program
San Diego County Water Authority HEWs**

Attachment A



**2003 Proposition 13 Urban Water Conservation Program
San Diego County Water Authority HEWs**

Attachment B

Cynthia J. Hansen
Water Resource Specialist
San Diego County Water Authority
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EDUCATION

- San Diego State University
Bachelor of Arts with Distinction in Public Administration, 1997
Applied Arts and Sciences, Public Administration
- Water Conservation Practitioner, Level 1, 1998
American Water Works Association, California-Nevada Section

WORK EXPERIENCE

San Diego County Water Authority

- Water Resources Specialist, Conservation
November 2000 to Present
- Assistant Water Resources Specialist, Conservation
October 1997 to November 2000

QUALIFICATIONS

- Manage the Authority's residential Ultra-Low-Flush Toilet (ULFT) and High-Efficiency Clothes Washer (HEW) voucher programs. These two programs are budgeted at more than \$2.2 million and allow for financial incentives for approximately 25,000 ULFTs and 6,000 HEWs in FY 2002.
- Administered the funding provided by the Metropolitan Water District and the Authority for the City of San Diego's ULFT Rebate Program. This program was budgeted at almost \$1.2 million and allowed for financial incentives for approximately 22,500 ULFTs in FY 2001.
- Managed the Community Based Organization ULFT Distribution Program and oversaw a \$960,000 annual budget.
- Serve on several California Urban Water Conservation Council committees.

2003 Proposition 13 Urban Water Conservation Program

A-2 Application Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the application on behalf of the applicant;

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant; and

The applicant will comply with all terms and conditions identified in this Application Package if selected for funding.

Signature

Ken Weinberg, Director of Water Resources
Name and title

11/27/02
Date